

EXHIBIT A

Honeywell's Amendments

3. (Amended) [The control system of Claim 32 wherein the compressor has] a control system for assisting a substantially constant minimum flow rate through a duct receiving air discharged from a compressor or the like having adjustable inlet guide vanes, the duct having a supply outlet connected to pneumatically-operated apparatus having a variable supply air demand, the duct further having an exhaust outlet, said control system comprising:
 (a) a flow regulating device adapted to be positioned in the exhaust outlet and operable to selectively vary air flow outwardly therethrough;

(b) a sensing device having a sensing portion adapted to be positioned in the duct to sense therein a predetermined parameter related to the air flow rate through the duct, said sensing device further having an output portion;

(c) an adjustable set point comparator having an input portion coupled to said output portion of said sensing device, and an output adapted to generate an error signal;

(d) a proportional controller having an inlet coupled to said output of said comparator and further having an outlet;

(e) an integral controller having an inlet coupled to said output of said comparator and further having an outlet;

(f) a summing junction having a first inlet coupled to said output of said proportional controller, a second inlet coupled to said output of said integral controller, and an outlet coupled to said flow regulating device; and [said control system further comprises]

(1) a guide vane position sensor and function generator coupled in series between the inlet guide vanes and said input portion of said comparator;

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4. (Amended) [The accessory power unit of Claim 14 wherein in said compressor has] a gas turbine engine accessory power unit having a fluctuating compressed air supply demand, said accessory power unit comprising:

(a) a compressor having adjustable inlet guide vanes; and
 (b) duct means for receiving compressed air discharged from said compressor and supplying the received air to the pneumatically-powered apparatus;

(c) surge bleed means operable to exhaust from said duct means a selectively variable quantity of air to assure at least a predetermined minimum flow rate through said duct means and thereby prevent surge of said compressor;

(d) sensing means for sensing the value of a predetermined, flow-related parameter within said duct means and generating an output signal indicative of said value, [the] said value of said flow-related parameter [is] being substantially independent of the temperature of the compressed air; and
 (e) comparator means for receiving said sensing means output signal and generating an error signal representing the difference between the sensed value of said parameter and a desired value thereof, said comparator means [have] having an adjustable control set point representing said desired value of said parameter; and said accessory power unit further comprising:

(1) means for transmitting to said comparator means a power signal for varying said set point as a function of the position of said inlet guide vanes in accordance with a predetermined set schedule; and
 (2) control means for activating said error signal and transmitting to said surge bleed means a control signal to operate said surge bleed means, the magnitude of said control signal having, relative to the magnitude of said error signal, a proportional component and an integral component,

whereby said minimum flow rate through said duct means is essentially constant regardless of the compressed air supply demand of the pneumatically-powered apparatus;

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4. (Amended) [The] a method of [Claim 49 wherein] utilizing a compressor of a gas turbine engine to power pneumatically-operated apparatus having a variable inlet air flow demand, the compressor [has] having adjustable inlet guide vanes, said method comprising the steps of:

(a) interconnecting a supply duct between the compressor and the pneumatically-operated apparatus;

(b) flowing discharge air from the compressor through said supply duct to the pneumatically-operated apparatus;

(c) maintaining an essentially constant minimum supply duct flow rate, despite fluctuations in the flow rate of air received by the pneumatically-operated apparatus, by exhausting air from said supply duct in response to variations therein of the value of a predetermined, flow-related parameter, the flow rate of air exhausted from said supply duct being related to the magnitude of said parameter value variations in both a proportional and time-integral manner, said maintaining step including the steps of providing an outlet passage from said supply duct, positioning in said outlet passage a surge bleed valve operable to selectively vary the flow of air outwardly through said outlet passage, generating an integral control signal in response to said variation in said flow-related parameter, generating a proportional control signal in response to said variations in said flow-related parameter, and simultaneously utilizing said integral and proportional control signals to operate said surge bleed valve; and

(d) said method further comprises the step of adjusting the relationship between the magnitudes of said integral and proportional control signals and the magnitudes of said parameter variations as a function of the position of the inlet guide vanes;

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